

**REMARKS****Status of Claims:**

Claims 31-56 are pending in the application. Each claim defines an invention that is novel and unobvious over the cited art. Favorable consideration of this case is respectfully requested.

**Rejection Under 35 U.S.C. § 103(a):**

Claims 31-40, 43-50, 52, 53, and 55 were rejected under 35 U.S.C. § 103(a) as being unpatentable over NGK Spark Plug (JP 2198560) (“NGK”) in view of Cassidy (6,280,474).

To establish *prima facie* obviousness of a claimed invention, ~~all the claim limitations~~ must be taught or suggested by the prior art. *In re Royka*. All words in a claim must be considered in judging the patentability of that claim against the prior art. *In re Wilson*. (MPEP § 2143.03). When evaluating the scope of a claim, every limitation in the claim must be considered. See e.g. *In re Ochiai*. (MPEP § 2144.08).

The evidentiary record fails to teach each limitation of the present invention. Specifically, the references taken as a whole or severally fail to teach any of:

1. calcium phosphate granules;
2. a “moldable, injectable mass;” and
3. bioresorbable particles.

Claim 31 recites “calcium phosphate granules.” NGK specifically teaches away from granular calcium phosphate. NGK teaches making calcium phosphate glass. NGK teaches making a ceramic bead by mixing “a wax type binder [with] calcium-phosphate ceramic material...It degrades after molding by the injection molding. It baked by 1100 degrees-Celsius and this was made into the sample bead.” (Page 13/19, last line to page 14/14, line 8). As is known in the art, this procedure forms the glass form of calcium phosphate. For example, Barlow et al. (submitted in accompanying IDS) disclose: “Calcium metaphosphate glass was formed from food grade monocalcium phosphate monohydrate ... by placing it in a furnace [at] 1050 °C. (Page 14, lines 1-3). Calcium phosphate glass is also taught by Manabe (US 5,236,495; IDS) (see column 2, lines 40-42 and column 3, line 68 – column 4, line 2).

Claim 31 recites a “moldable, injectable mass.” Although NGK is ambiguous respecting “injectable,” it is silent as to “moldable.” Cassidy explicitly teaches away from each of moldable and injectable. Cassidy relates to a device to be emplaced, by hand, into a broken bone to provide a rigid mechanical anchor. “More specifically, the implants impart enhanced load bearing capacity to hard tissue, which increases the load that can be put on the hard tissue during the repair process.” (Column 8, lines 9-10). Cassidy further relates to a “dense, pre-formed hard tissue implant.” (Column 3, lines 18-19). “dense, preformed hard,” clearly teaches away from moldable and injectable.

Claim 31 further recites a bioresorbable composition. Although Cassidy teaches bioresorption, Cassidy does so in the absence of the calcium phosphate glass of NGK. NGK teaches a non-bioresorbable calcium phosphate glass. Yli-Urpo (US 5,139,424; IDS) teaches that calcium phosphate glass may be bioresorbable or non-bioresorbable, depending upon its composition. (Column 4, lines 20-25). NGK teaches non-bioresorbable calcium phosphate glass, reciting: the “ceramic body is recovered after a drug elution...and the ceramic body can be used circularly [recycled].” (Page 15/19 ). Cassidy is not properly combinable with NGK because the bioresorption or Cassidy defeats the ability to recover and reuse the calcium phosphate glass ceramic body of NGK. Where the Examiner proposes a combination that makes a prior art reference inoperable for its intended purpose, the resulting inoperable prior art reference is considered to teach away from the proposed combination, thereby supporting a showing of nonobviousness. *In re Gordon*, 733 F.2d 900, 902 (Fed. Cir. 1984) (Finding no suggestion to modify a prior art device where the modification would make the device inoperable for its intended purpose); *TecAir, Inc. v. Denso Mfg. Michigan Inc.*, 192 F.3d 1353, 52 USPQ 2d 1294, 1298 (Fed. Cir. 1999) (Holding that because the combination was inoperable for its intended purpose, a jury could reasonably find the patent taught away from the combination); *In re Sponnoble*, 405 F.2d 578, 587 (CCPA 1969)(Holding if where combined, the references would produce a seemingly inoperative device, the references teach away from their combination).

Thus respecting each of three recitation present in claim 31, the references cited by the Examiner teach away from the present invention. “Teaching away” is a per se demonstration of non-obviousness. (See *U.S. v Adams*, 383 US 39 (1966).

Claims 41,42, 51, and 54 were rejected under 35 U.S.C. § 103(a) as being unpatentable over NGK Spark Plug (JP 2198560) ("NGK") in view of Cassidy (6,280,474) and further in view of Larsson (5,196,201).

As discussed above in relation to claim 31, the base of each claim subject to the instant rejection, each of NGK and Cassidy teach away from the present invention. Larsson is not properly combinable with either NGK or Cassidy because the various liquid phases of Larsson are incompatible with a rigid sintered body of NGK or with a dense, pre-formed body of Cassidy. Moreover, Larsson teaches away from the present invention because Larsson teaches a non-bioresorbable hydroxyapatite. "Especially preferably [sic] is calcium hydroxyapatite, particularly the non-resorbable type thereof which has the formula  $\text{Ca}_{10}(\text{PO}_3)_6(\text{OH})_2$ ." (Column 4, lines 24-26).

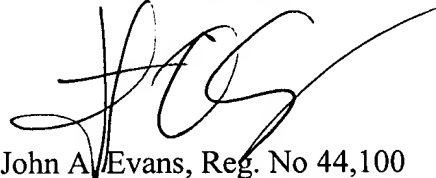
In view of the above, consideration and allowance are, therefore, respectfully solicited.

Accordingly, it is respectfully requested that the foregoing amendments be entered, that the application as so amended receive an examination on the merits, and that the claims as now presented receive an early allowance.

In the event the Examiner believes an interview might serve to advance the prosecution of this application in any way, the undersigned attorney is available at the telephone number noted below.

The Commissioner is hereby authorized to charge any fees or credit any overpayment associated with this communication, including any extension fees or fees for the net addition of claims, to Deposit Account No. 22-0185.

Respectfully submitted,



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